

What is Alzheimer's disease?

Alzheimer's is a disease of the brain that causes a steady decline in memory. This results in dementia - loss of intellectual functions (thinking, remembering, and reasoning) severe enough to interfere with everyday life.

When German physician Alois Alzheimer first described the disease in 1906, it was considered rare. Today, Alzheimer's disease is the most common cause of dementia, affecting 10 percent of people 65 years old, and nearly 50 percent of those age 85 or older. An estimated 4 million Americans have Alzheimer's.

Alzheimer's disease usually begins gradually, causing a person to forget recent events and to have difficulty performing familiar tasks. How rapidly the disease advances varies from person to person, causing confusion, personality and behavior changes, and impaired judgment. Communication becomes difficult as the person with Alzheimer's struggles to find words, finish thoughts, or follow directions. Eventually, persons with Alzheimer's become totally unable to care for themselves.

What causes Alzheimer's disease?

Scientists are still not certain. Research suggests that the central problem in Alzheimer's disease is malfunction and death of nerve cells, but scientists are still working to learn why this happens. Key areas of ongoing study focus on biochemical processes and pathways in nerve cells, effects of inflammation, and the influence of genes. Many experts believe that Alzheimer's usually arises from a complex combination of factors. Future treatments may involve a variety of approaches aimed at prevention, improving or delaying symptoms, or modifying cellular chemistry.

What are the risk factors for Alzheimer's disease?

The strongest evidence so far points to age and family history. Increasing age is the greatest known risk factor—about 10 percent of people have Alzheimer's by the time they reach age 65, and nearly 50 percent are affected by age 85. Alzheimer's strikes individuals from every walk of life, every ethnic group, and every income level.

Family history is another predisposing factor. Having a parent or sibling with the disease increases an individual's chances of developing Alzheimer's. Scientists have found one gene that raises Alzheimer risk as well as several faulty genes causing rare forms of Alzheimer's that tend to occur before age 65.

Does Alzheimer's disease occur in younger adults?

Yes. The disease can occur in people in their 30s, 40s and 50s, however, most people diagnosed with Alzheimer's are older than age 65. This is called "early-onset" and represents less than 10 percent of Alzheimer cases. When a younger adult has Alzheimer's disease, the issues related to care, financial planning, work, family, children, etc., can be very different than with older adults with the disease.

What is the difference between Alzheimer's disease and normal age-related memory difficulties?

Activity	A Person with Alzheimer's Disease	A Person with Age-Associated Memory Problems
Forgets	whole experiences	parts of an experience
Remembers later	rarely	often
Can follow written or spoken directions	gradually unable	usually able
Can use notes	gradually unable	usually able
Can care for self	gradually unable	usually able

NOTE: Determination of whether memory loss is associated with Alzheimer's disease can only be made by health care professionals.

Isn't memory loss a natural part of aging?

Yes and no. Everyone has forgotten where they parked the car or the name of an acquaintance at one time or another. And many healthy individuals are less able to remember certain kinds of information as they get older.

The symptoms of Alzheimer's disease are much more severe than such simple memory lapses. Alzheimer symptoms affect communication, learning, thinking, reasoning, and can have an impact on a person's work and social life.

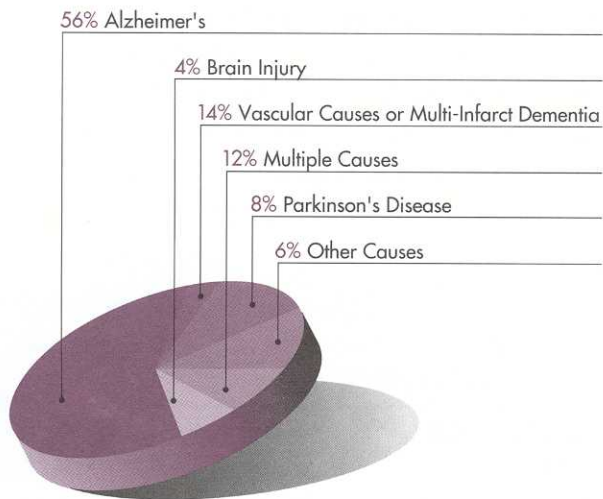
The chart below provides examples of the differences between persons with Alzheimer's disease and age-related memory problems.

Derived from the book *Caring for People with Alzheimer's Disease: A Manual for Facility Staff* by Lisa P. Gwyther

What other diseases act like Alzheimer's?

Many conditions can cause dementia. Dementia related to depression, drug interaction, thyroid and other problems may be reversible if detected early. It is important to identify the actual cause in order to receive proper care. Alzheimer's disease is the leading cause of dementia, as the graph below shows.

Causes of Dementia



Some of the other diseases that cause dementia are:

Creutzfeldt-Jakob disease (CJD) - a rare, fatal brain disease caused by infection. Symptoms are failing memory, changes in behavior and lack of muscular coordination. CJD progresses rapidly, usually causing death within a year. No treatment is currently available.

Multi-infarct dementia (MID) - also known as vascular dementia, results from brain damage caused by multiple strokes (infarcts) within the brain. Symptoms can include disorientation, confusion and behavioral changes. MID is neither reversible nor curable, but treatment of underlying conditions (e.g., high blood pressure) may halt progression.

Normal pressure hydrocephalus (NPH) -

a rare disease caused by an obstruction in the flow of spinal fluid. Symptoms include difficulty in walking, memory loss and incontinence. NPH may be related to a history of meningitis, encephalitis, or brain injury, and is often correctable with surgery.

Pick's disease - a rare brain disease that closely resembles Alzheimer's, with personality changes and disorientation that may precede memory loss. As with Alzheimer's disease, diagnosis is difficult, and can only be confirmed by autopsy.

Parkinson's disease - a disease affecting control of muscle activity, resulting in tremors, stiffness and speech impediment. In late stages, dementia can occur, including Alzheimer's disease. Parkinson drugs can improve steadiness and control, but have no effect on mental deterioration.

Lewy body disease - a disease, recognized only in recent years, in which the symptoms are a combination of Alzheimer's disease and Parkinson's disease. Usually, dementia symptoms are initially present followed by the abnormal movements associated with Parkinson's. There is no treatment currently available.

Huntington's disease - a hereditary disorder characterized by irregular movements of the limbs and facial muscles, a decline in thinking ability, and personality changes. In contrast to Alzheimer's, Huntington's can be positively diagnosed and its movement disorders and psychiatric symptoms controlled with drugs. The progressive nature of the disease cannot be stopped.

Depression - a psychiatric condition marked by sadness, inactivity, difficulty with thinking and concentration, feelings of hopelessness, and, in some cases, suicidal tendencies. Many severely depressed persons also display symptoms of memory loss. Depression can often be reversed with treatment.

How is Alzheimer's disease diagnosed?

There is no single diagnostic test. Instead, Alzheimer's disease is diagnosed through process of elimination - to rule out other diseases and conditions that can also cause dementia. Whether conducted by a family physician or a team of specialists, the process usually involves the following:

- A thorough medical history of the person with symptoms of Alzheimer's as well as family members
- An assessment of the person's mental status
- A thorough physical exam
- A neurological exam
- A series of lab tests
- Psychological and other exams

A diagnosis of Alzheimer's disease obtained through this evaluation is considered 80 to 90 percent accurate. The only way to be absolutely certain the person has Alzheimer's is through an autopsy.

What treatment is available?

There is no medical treatment at this time to cure or stop the progression of Alzheimer's disease. Four drugs approved by the FDA —tacrine (Cognex®), donepezil (Aricept®), rivastigmine (Exelon®), and galantamine (Reminyl®), —may temporarily improve symptoms of the disease.

In addition, many promising new drugs are now being studied to find out whether they can slow the progression of the disease or improve memory. To learn more about current clinical drug trials, contact the Alzheimer's Association at (800) 272-3900.

Medications are also available to reduce some of the behavioral symptoms associated with Alzheimer's, such as depression, sleeplessness and agitation.



What else can be done?

Learn how the Alzheimer's Association can help.

The Alzheimer's Association has a national network of chapters, providing programs and services within their communities that assist persons with Alzheimer's disease, their families and caregivers. These programs and services include support groups, telephone helplines, educational seminars, and a variety of publications on the disease, on current research, caregiving approaches and more.

The Alzheimer's Association is the largest national voluntary health organization dedicated to conquering Alzheimer's disease through research, and to providing education, support, and advocacy for people with Alzheimer's disease, their families and caregivers. For more information or to contact the chapter nearest you, call:

(800) 272-3900

or e-mail: info@alz.org

What additional resources are available?

The following resource materials are available from your local chapter or the national office of the Alzheimer's Association:

- *Is it Alzheimer's? Warning Signs You Should Know*
- *Steps to Getting a Diagnosis: Finding Out if It's Alzheimer's Disease*
- *Steps to Enhancing Communication: Interacting with Persons with Alzheimer's Disease*
- *Steps to Understanding Challenging Behaviors: Responding to Persons with Alzheimer's Disease*
- *Steps to Planning Activities: Structuring the Day at Home*
- *Steps to Understanding Legal Issues: Planning for the Future*
- *Steps to Enhancing Your Home: Modifying the Environment*
- *Caregiver Stress: Signs to Watch For, Steps to Take*
- *The 36-Hour Day: A Family Guide to Caring for Persons with Alzheimer Disease, Related Dementing Illnesses, and Memory Loss in Later Life* by Nancy L. Mace, M.A. and Peter V. Rabins, M.D, M.P.H. Baltimore: John Hopkins University Press, 1999 (third edition)
- *Drug Fact Sheets*